

**APPENDIX B**  
**SUBREGION DESCRIPTIONS**

## **APPENDIX B**

### **WEST MOJAVE TRAVEL MANAGEMENT AREAS AND SUBREGIONS**

#### **Introduction**

One of the first steps in the off-road vehicle designation process was the identification of travel management areas (TMA) for travel network. Eight travel management areas provide the geographical framework for implementation of the travel network through specific transportation and travel management (TTM) plans. The factors used in the development of boundaries for TMA are primarily natural transportation boundaries (e.g. highways, jurisdictional, geographic boundaries). Because of the size of the West Mojave (WEMO) Planning area, the eight TMA were further subdivided into 36 Subregions. The boundaries of the 36 Subregions that compose the TMA consider the natural transportation boundaries, law enforcement patrol areas, designated management areas, and issue-driven factors.

By comparison, the 2006 WEMO Plan had identified 20 different Subregions, which included much but not all of the West Mojave Planning area, from which they examined 11 subregions to build the WEMO network. The 2006 WEMO Subregions are based on similarities in certain biological characteristics but do not readily lend themselves to on-the-ground implementation of the transportation network. The 2006 WEMO Subregion boundaries roughly correlate to the new Subregion boundaries as feasible.

The following discussion provides a general overview of each of the Travel Management Areas and the Subregions within it.

#### **B.1 Travel Management Area (TMA) 1**

##### ***Afton Canyon Subregion***

The Afton Canyon Subregion comprises the northeastern third of TMA 1, extending south from Interstate 15 to include both the Afton Canyon ACEC and the northern two-thirds of the Cady Mountains Wilderness Study Area. It is accessed by the Afton or Basin exits off of Interstate 15 or from Crucero Road on the south. It is bisected by the Mojave River, and bounded on the east by the Rasor OHV Open Area and the Mojave National Preserve and, to the south of the Preserve, the old Tonapah and Tidewater (T&T) Railroad and the adjacent Crucero Road that continue south along the boundary of the Broadwell Lake Subregion to Ludlow, CA. The Afton Canyon Subregion also extends westward to the boundary of the Manix Paleontological ACEC, which is in this subregion. The southern boundary of the subregion is a major wash which begins at Crucero Road on the east, becomes Hidden Valley Road, and extends to private residences surrounded by agricultural lands on the west, south of the Manix ACEC.

This area is characterized by its geologic features, deep canyons carved out of the badlands in the desert landscape, formed when Lake Manix, located at the eastern edge of the subregion, drained 19,000 years ago. The centerpiece of the area is the Afton Canyon Natural Area ACEC, which was designated in the CDCA Plan in recognition of its unique stratigraphy and its unrivaled combination of riparian, geologic, cultural, transportation, and recreational features in the West Mojave. The most predominant feature of the Afton Canyon ACEC is the Mojave River, which forms a 600-foot deep canyon as it flows aboveground here, one of only three places where the

Mojave River does so. To the west of the Afton Canyon ACEC, most of the public lands that remain along the river have been designated as one of the units of the Mojave Fringe-Toed Lizard ACEC.

The Cady Mountains Wilderness Study Area (WSA) overlaps the southern third of the ACEC and extends further south beyond the boundary of the Subregion. The WSA is characterized by a series of detached ridges and deep valleys with the highest peak being Cady Mountain.

Within the Afton Canyon subregion, the CNDDDB documents the occurrence of five special status species (desert tortoise, golden eagle, pallid bat, fringed myotis, and Nelson's bighorn sheep) and/or suitable habitat. Although present, only a small amount (approximately 2 acres) of desert tortoise Critical Habitat and the Superior-Cronese DWMA are found within this subregion.

In Afton Canyon the Mojave River flows aboveground year-round and supports riparian woodlands with an unusual riparian plant community. It hosts many rare bird species, provides much needed riparian sustenance for all desert wildlife, and the canyon cliffs are home to nesting raptors. The Mojave River meanders through the canyon along a broad, flat sandy floor a few hundred feet wide, framed by its scenic vertical walls with multiple colors and interesting features. The river flows all year long on the west side of the canyon. A thick ribbon of plants comprised of native & invasive species lines the riparian zone and supports a wide diversity of wildlife, including bighorn sheep, mountain lion, badger, coyote, raptors, and numerous small mammals, reptiles, rodents & birds. There is frequent vehicle and train traffic in and through the canyon.

The stratigraphy provides gorgeous scenic vistas as the traveler enters the canyons of the Mojave River and as one travels in the more remote canyons in the WSA to the south in the Cady Mountains. The Cady Mountains is home to a bighorn sheep herd and lambing area. Bighorn travel from the remote lambing areas in the WSA to the Mojave River regularly to drink, and sunup or sundown can offer spectacular views of sheep offset by the canyon landscape. The Afton Subregion also provides bighorn corridors between the lambing area and points northward and southeastward. The CNDDDB reports approximately 27,336 acres of historic occurrence data within this subregion for Nelson's bighorn sheep.

The Mojave River also forms a primary prehistoric, historic, and modern transportation corridor from the eastern Mojave basin and ranges province into the West Mojave desert, and evidence of this use is present on the landscape. Humans in the Afton Canyon area left a record in the form of stone tools and pottery, some of it estimated to be over 8,000 years old. Spanish missionaries were the first documented Europeans through the area, in 1776.

The Mojave Road or Mojave Trail is a historic route across the Mojave Desert, linking watering holes between the Colorado River and San Bernardino; the Mojave Road was used by Native Americans and later served Spanish missionaries, explorers, foreign colonizers, and settlers from the 18th to 19th centuries. The Old Spanish Trail was a historic trade route which also follows the Mojave Road through the Afton Subregion, and which connected the settlements near Santa Fe, New Mexico with those of Los Angeles and southern California. The segment of the Old Spanish Trail across the Mojave Desert was considered one of the most arduous and difficult for pioneers to navigate, making the Afton Canyon a special oasis on the arduous journey.

The Baxter Mine, a large iron mine, operates at the eastern end of the subregion and large trucks regularly access the mine via Basin Road. Other mineral exploration occurs in the area as well.

Grazing historically has occurred in this area, but the only obvious evidence remaining is in areas of range improvements. The Afton Canyon Subregion is known for its distinctive recreational opportunities, such as the motorized route along the historic Mojave Road, the camping opportunity at the improved campground, hiking, equestrian, and rock hounding opportunities.

Primary activities in Afton Canyon include camping in the developed fee campground & group camp site, river play, hiking, historic Mojave Road touring, equestrian riding, bird watching, bighorn sheep and wildlife viewing, photography, nature study, rock collecting, scenic touring, 4 x 4 exploration, geo-caching and hunting.

Visitor facilities include two ACEC campgrounds, an equestrian campground, and interpretative signs and kiosks. The Afton Canyon campgrounds are popular and regularly used by regional residents and travelers on long distance multi day camping trips due to easy access off of Interstate 15. From the campground, an easy loop through the canyon and up Basin Road brings the traveler back to the Interstate. The campground is also used to stage OHV over to the adjacent Rasor OHV Open Area.

The Mojave Road route is now regularly traveled by recreational tourists seeking to understand the experiences of earlier historic travelers and retrace the ancient and historic trail. Remnants can be followed from the Colorado River to the site of the old Camp Cady further upstream along the Mojave River, located in the adjacent Barstow Subregion.

Primary activities in the southern half of this subregion, particularly in the Cady Mountains WSA, are wildlife viewing and rockhounding. The WSA is widely known as a premier rockhounding location in the West Mojave.

Historically, the travel route through Afton Canyon has utilized the sandy riverbed through large portions of the canyon. The route has been moved out of the riparian area, and uses either side of the river, but vehicles still must cross the river to traverse the entire canyon area and to avoid a major railroad crossing at the east end of the canyon. The railroad through the canyon runs adjacent to the travel route through much of the canyon; the private railroad crossing at the east end of the canyon between the Natural Area and the Rasor OHV Area is a popular shortcut used instead of the official route across a sandy portion of the river, in order to continue south to the Cady Mountains and Interstate 40. The private crossing area is more dangerous than most crossings because multiple tracks come together at this location so that to get from one side to the other, at least 3 sets of tracks must be crossed.

The designated river crossings are sometimes impassible because of high water. Use of the route at these times creates sedimentation in the river, which dissipates over time as the flows continue. Because of plantings by the railroad and downstream depositions of seeds, invasive tamarisk plants have been a recurring problem in the river channel. An ongoing restoration program has been underway since 1990 to restore and maintain the river channel riparian vegetation. Much of the channel has been fenced to prevent OHV intrusions where restoration activities have taken place.

OHV travel from the ACEC campgrounds has resulted in route proliferation in various areas away from the river. The lack of a loop route to the campground has resulted in campers creating loop routes on their own through the ACEC. The routes south to the Cady Mountains WSA are very scenic. The primitive trails within the WSA are very sandy or very steep and rocky in places, and can be difficult to follow. Some route proliferation has resulted from

motorcyclists crossing the river from the Afton Campground area and creating trails up steep canyons to the top of the peaks in the Cady Mountains in the WSA.

The iron mine is accessed from Interstate 15 and Basin Road at the eastern boundary of this subregion. Basin Road is a maintained County Road that is used by both mining trucks and casual users on their way to Afton Canyon or the Rasor OHV Open Area. Once the County Road splits from the OHV route, the County Road continues up to the mine entrance. Several OHV routes are located off of this last stretch of County Road on the way up to the mine. These routes are both on public lands as well as the adjacent patented mine land, and are a potential safety issue for OHVs and the large mine trucks that travel up and down the County Road.

### ***Broadwell Lake Subregion***

The Broadwell Lake Subregion forms the southeastern third of TMA 1. It begins at Ludlow, California at the eastern edge of the WEMO Planning Area, runs north from Ludlow along Crucero Road, turns west along a wash that defines its northern border, and follows the public lands boundary back south to Interstate-40, which forms the southern boundary of the subregion. Troy Lake is north of Interstate 40 in the subregion near its western boundary, and the subregion is bisected by an east-west utility road that forms the southern boundary of the Cady Mountains WSA.

The northern half of the subregion includes Sleeping Beauty Mountain, a part of the southern Cady Mountains. South of Sleeping Beauty Mountain is a broad, scenic valley named Hidden Valley which extends for six miles. The southern half of the subregion is a large, sweeping bajada sloping southward to Interstate 40. Adjacent to Interstate 40 in the southeastern-most portion of the subregion is the northern half of the Pisgah Crater ACEC. The lava rock interspersed with sandy soils provides habitat for unusual plants such as crucifixion thorn and potential habitat for the Mojave fringe-toed lizard. Elevations within the subregion range from 1,300 to 3,980 feet. Access to this subregion is generally from Interstate 40, via Lavic off-ramp.

The larger sandy washes draining the southern Cady Mountains support disjunct occurrences of white-margined beardtongue and crucifixion thorn, both sensitive plant species. The subregion includes the occurrence of the following special status wildlife species and/or suitable habitat: Bendire's thrasher, burrowing owl, golden eagle, Mojave fringe-toed lizard, and Nelson's bighorn sheep. Approximately 12,000 acres within this subregion has been designated as an ACEC to protect the Mojave fringe-toed lizard. In addition, the southern Cady Mountains is also home to the bighorn sheep herd and lambing area that crosses between this subregion and the Afton Subregion. The Broadwell Lake subregion also includes one of the bighorn corridors, from the lambing areas and points southeastward.

Commercial activities in the subregion include the development and maintenance of major linear utilities, which include the transmission line and pipeline along the southern boundary of the Cady Mountains WSA. A solar facility had been permitted in the southern portion of the subregion, but did not get developed due to a lack of available electrical transmission capacity. Historic mineral prospecting has occurred, particularly in the southeastern portion of the subregion, and portions of the subregion were part of the cattle grazing allotment that extends northward into the Afton Canyon area.

Due to the remoteness of the Broadwell Lake Subregion and the relative inaccessibility of the Cady Mountains WSA, this subregion receives light recreational use. Recreation activities include recreational prospecting, rockhounding, wildlife viewing, and vehicle touring.

One major issue is the lack of a legal crossing of the railroad tracks north of Interstate 40 off Hector Road. While the lack of legal railroad crossings is an issue everywhere in the West Mojave, the lack of alternative north-south access for miles makes it more problematic at this location.

There has been some route proliferation in the southwestern portion of the subregion near Troy Lake and the adjacent interface with adjacent private lands. However, overall the subregion has few access conflicts due to the relatively light use it receives.

### ***Barstow Subregion***

Public lands along the Mojave River that retain their riparian integrity provide additional habitat and potential intermittent water source for wildlife. One of the other two locations where the Mojave River can flow aboveground is Camp Cady Wildlife Area, located within and adjacent to a portion of the Mojave River approximately 23 miles east of Barstow, California, about 2.5 miles southeast of the Harvard Road exit on Interstate 15. The Wildlife Area is state land, administered by the California Department of Fish and Wildlife and is managed for sensitive riparian plants and animals, including a fish known as the Mojave tui chub. The Mojave Fringe-toed lizard also makes its home in the sandbars adjacent to the Mojave River in this Subregion and further northeast along the river in the Afton Subregion.

Special status plant species occurring in the subregion include the Mojave monkeyflower and Parish's phacelia. Approximately 650 acres of a designated ACEC to protect the Mojave monkeyflower overlaps with the subregion. The subregion includes the occurrence of the following special status wildlife species and/or suitable habitat: burrowing owl, desert tortoise, golden eagle, and Le Conte's thrasher. Approximately 3,337 acres within this subregion has been designated as an ACEC to protect the Mojave fringe-toed lizard.

Camp Cady is also historic military camp dating from the 1860's. Although the Old Spanish Trail and the Mojave Trail continue adjacent to the river, it is difficult to follow the trails due to the intermittent land ownership patterns. Evidence of prehistoric and historic use of these trails and the riverine area has generally been lost over time, due to repeated intermittent Mojave River flood flows.

Most public lands in this area have been disposed of, and those that remain in the subregion are primarily located along the Mojave River corridor, with a few other scattered locations that are surrounded by private land. Most of the public lands that remain along the river have been designated as one of the units of the Mojave Fringe-Toed Lizard ACEC.

The majority of lands in this area are private, including some of the best agricultural lands in the West Mojave as well as small towns and rural developments that are concentrated near the two Interstate highways. The MCLB military depot and a small, rural commuter airport can also be found in the subregion. A power-plant is located in the subregion, which is crossed by a major north-south transmission corridor which includes both electrical and pipeline transmission facilities. There is little topography in the eastern two-thirds of the subregion. Closer to

Barstow, Elephant Mountain dominates the skyline, along with the many communication sites on its back.

## **B.2 Travel Management Area 2**

### ***Darwin Subregion***

The CNDDDB documents the occurrence of four special status species (Le Conte's thrasher, pallid bat, Death Valley sandpaper-plant, and Nelson's bighorn sheep) and/or suitable habitat within the Darwin subregion. There are approximately 277 acres of BLM designated habitat for the Le Conte's thrasher located near the western boundary of this subregion. Additionally, the Darwin subregion contains the only known occurrence data for the Death Valley sandpaper-plant within the WEMO planning area.

Due to the area being bounded on the south by the China Lake Naval Weapons Center accidental vehicle trespass is an occasional issue in the area along with private property trespass within the community of Darwin itself.

The subregion is comprised of open desert expanse that is sporadically interrupted topographically by the upper extent of the Coso Range, the Darwin Hills, and other unnamed hills. The Darwin Falls Wilderness is on the north east flank of the area which provides opportunities for primitive and unconfined non-mechanized forms of recreation. The area is popular for its backcountry vehicle touring and exploration of historic mining sites, primitive camping, packing, hiking, camping, rock collecting, wild horse viewing, and photography. Popular recreational destinations include China Gardens spring, Lower Centennial cabin site, and the historic mining community of Darwin.

### ***North Searles Subregion***

The North Searles subregion, is located approximately 28 miles northeast of Ridgecrest, immediately north of Pioneer Point and the community of Trona. It is bounded by Slate Range Crossing on the north, the crest of the Slate Range on the east, the Inyo-San Bernardino County line on the south, and the China Lake Naval Air Weapons Station (NAWS) boundary on the west.

The Great Falls Basin ACEC, Argus Mountains wilderness and the Great Falls Basin Wilderness Study Area are surrounded by this subregion on three sides. The general region consists of the upper part of Searles Valley, part of the ancient lakebed above Searles Lake. It is encircled by two prominent mountain ranges on the west, and east and north - the Argus and Slate ranges, respectively. The area is made up almost entirely of gravel, sand, and silt lakebed sediments. Elevations start as low as 1600 feet on the southern Inyo-San Bernardino County boundary, climbing to more than 5300 feet above sea level to the west in the Argus Range and to 4950 feet above sea level in the east along the crest of the Slate Range.

Common plant communities predominate in this area, including Mojave saltbush and creosote bush scrub in the lowlands, with rabbitbrush dominating communities in the washes. However, Joshua trees are found in sparse stands at a few locations at upper elevations in the Argus and Slate ranges. The subregion also contains the Indian Joe Canyon Ecological Reserve, a Department of Fish and Wildlife property protecting significant riparian habitat. Smaller riparian communities exist at isolated seeps and springs throughout the Argus Range. These

communities, made up mostly of willow and baccharis, comprise the sole critical habitat for a threatened species, the Inyo California towhee. This is a subspecies of towhee endemic only to the southern Argus Range.

Due to its location along the highway to Death Valley National Park (Highway 178) and close proximity to the community of Trona, visitation is generally high throughout the year, especially in the cooler months. The many small seeps and springs attract upland game hunters, as well as more casual visitors from the surrounding local area.

Casual OHV recreational use involving dune buggies, quads, and motorcycles is popular within the subregion. The majority of these users are local residents from Trona and nearby communities or from Homewood Canyon. Several commercial 4-wheel drive, dual sport motorcycle and equestrian tours, and equestrian competitive endurance rides occur in this area.

Numerous dispersed camping opportunities exist along the route network. While some staging areas off of Highway 178 exist, most off road vehicle enthusiasts stage from their own homes in nearby communities. There are many unmaintained dirt roads that directly connect these communities to the route system in the area. Virtually all trails in this subregion accommodate full-size 4x4 vehicles, as opposed to single-track motorcycle routes. Many of these trails offer challenges requiring strong 4x4 driving skills, particularly in rocky and mountainous stretches of the Slate and Argus Ranges.

Gem and mineral collecting also occurs throughout the Argus and Slate Ranges. Trona is home to an interpretative museum and hosts an annual gem and mineral show. Other uses occurring within the subregion are birdwatching, climbing, equestrian rides, hiking, target shooting, hunting, and rockhounding. Regular bird censuses are taken in Indian Joe Canyon ecological preserve by volunteers, and the Great Falls Basin is particularly popular with backpackers.

Due to its location near several small, rural communities, trash and graffiti, including in sensitive areas, are ongoing issues, requiring regular response. Route proliferation, such as vehicle trespass to Austin Springs at the base of the falls and to various unauthorized hill climbs in the immediate vicinity are ongoing issues in the Great Falls Basin ACEC. Fences have been built at several springs in the area to protect towhee critical habitat from damage by wild burros, horses, or vehicles.

### ***South Searles Subregion***

The South Searles subregion, is located approximately 8 miles northeast of Ridgecrest, immediately north of Randsburg Wash Road and the Spangler Hills Open Area. Randsburg Wash Road defines the subregion on the south, the China Lake Naval Air Weapons Station (NAWS) boundaries on both its east and west sides, and by the Inyo-Kern County line on the north. Numerous landowners own the private lands. The Trona Pinnacles National Natural Landmark and ACEC are surrounded by the subregion on all four sides.

The general region consists of the lower part of Searles Valley surrounding Searles Lake. It is encircled by two prominent mountain ranges, the Argus and Slates, on the west and east, and by the Spangler Hills on the south. The area abuts the upper half of Searles Valley above Searles Lake to the north - an area covered by the North Searles Subregion. The area is made up almost entirely of gravel to sandy to silty lakebed sediments. Elevations within this subregion are generally quite low, keeping to within 1600-2500 feet on the valley floor, to more than 2800 feet



at selected high points in the Argus Range. Visitation is generally high, particularly in cooler, winter months, due to the presence of the Trona Pinnacles, and the subregion's general location along a highway to Death Valley National Park (Highway 178) and close proximity to the communities of Trona and Ridgecrest. Mojave saltbush and creosote bush scrub are the predominant plant communities on the valley floor, with rabbitbrush dominating plant communities in upper elevation washes.

The South Searles is located within the Ridgecrest Mohave ground squirrel key population center.

Access to this subregion is primarily from Highway 178 and its Trona-Wildrose extension. The subregion can also be accessed from the Randsburg-Wash road, north of the Spangler Hills Open Area.

In general, the area absorbs a lot of casual OHV recreational use involving dune buggies, quads, and motorcycles. Most of these users are local residents. They come from Trona and the associated communities of West End, Argus, and Pioneer Point, or from Homewood Canyon. Some gem and mineral collecting also occurs, primarily in the foothills of the Argus Range on the western edge of the subregion. In October, the Searles Valley Gem and Mineral Society put on a Gem and Mineral Show. The subregion is also used for interpretative museum and commercial 4-wheel drive, dual sport motorcycle and equestrian tours.

Vehicles are permitted to pull off within 300 feet of a route to make camp in the subregion, except in the vicinity of the Pinnacles where visitors are asked to camp only in already impacted sites. Laws and regulations prohibit camping or staying within 200 yards of waters, which includes the natural seeps and springs in the Argus Range. Currently, all access routes on public land in this subregion comply with applicable law.

Most trails in the subregion are full-size 4x4 as opposed to quad or single-track routes, which exist only in the extreme southwestern corner of the subregion. While some staging areas off of Highway 178 exist, most off-road vehicle enthusiasts probably stage from campsites within the Trona Pinnacles or from various campsites within the Spangler Open Area just outside the subregion. Local people most likely enter this area directly from their homes in West End, South Trona, and Argus. For access to good riding areas, they must cross highway 178, traveling approximately 7 miles south of town to reach the Pinnacles or more than 12 miles to reach the Spangler Open Area.

The area offers very few opportunities for backcountry touring and sightseeing outside of the Trona Pinnacles National Natural Landmark. Climbers have not been observed in great numbers within the subregion. Equestrian use is tied to spring sources or in the case of organized, commercial and/or competitive events to regular vehicle routes for staging the necessary water and periodic veterinarian checks. Most people who hike in the area are locals who are simply exploring their own backyards.

Access to hunting areas is limited within the subregion. Hunting thus requires a good deal of hiking in the subregion. Hunters are known to pursue chukar over steep rocky terrain for long distances. Chukar and California quail are the primary targets although jackrabbits and mourning dove are hunted as well.

Non-motorized trails for mountain bikers do not exist in the area. However, mountain biking is popular along Highway 178 and with campers at the Pinnacles.

Rockhounding occurs throughout the area, in specific localities, mostly in the foothills of the Argus and Slate Ranges. During October's Gem and Mineral Show, the Searles Valley Gem and Mineral Society offers information about and several tours to various collecting and other sites of local interest in the valley.

Target shooting occurs throughout the area and is generally permitted wherever the terrain offers a safe backstop. However, the ACEC Plan for The Trona Pinnacles specifically prohibits target shooting anywhere within the vicinity of the National Landmark.

### ***Sierra Subregion***

The East Sierra subregion, located approximately 10 miles west of Ridgecrest, is defined by Highway 14 on the east; Highway 178 on the south; the Bakersfield BLM Field Office and Sequoia National Forest boundaries on the west; and the Class L and Class M boundary in the Coso Junction and Rose Valley area on the north. The Owens Peak and Sacatar Trail wilderness areas (49,009 and 33,132 acres) are located within this sub-region.

All or parts of three ACECs are found within the East Sierra subregion: Fossil Falls, Sand Canyon and Last Chance Canyon. Route designation for Fossil Falls and Sand Canyon was designated by their management plans and is not changed by the West Mojave Plan. For the Last Chance Canyon ACEC, Alternative A would adopt the 1985-87 route designations, except for the east access to Mesa Springs, which was recommended for closure by the 1982 ACEC management plan. This network would be effective on an interim basis, until the completion of a collaborative and community-based program to develop a revised motorized vehicle access network for the El Paso Mountains, including all of the Last Chance Canyon ACEC outside wilderness. Participants in this effort would include the City of Ridgecrest, Kern County, BLM and interested stakeholders. When completed, the revised network for the El Paso Mountains would be incorporated into the CDCA and West Mojave Plans through an amendment.

The region consists primarily of the eastern face of the southern Sierra Nevada. Elevations range from 2,400 feet along Highway 14 to 8,453 feet above sea level on top of Owens Peak. The mountainous terrain has deep, winding, open and expansive canyons, many of which contain springs with extensive riparian vegetation. This area is a transition zone between the Great Basin, Mojave Desert and Sierra Nevada ecoregions. Vegetation varies considerably with a creosote bush scrub and Joshua tree woodland community on the bajadas, and cottonwood and willow riparian vegetation in the canyons at lower elevations. Above 5,000 feet, the canyons and ridges are dominated by pinyon-juniper woodland with sagebrush and grey pine.

The Sierra subregion includes the occurrence of the following special status species and/or suitable habitat:

- Plants
  - Charlotte's phacelia
  - Dedecker's clover
  - Hall's daisy
  - Mojave tarplant
  - Nine Mile Canyon phacelia

- Owen's Peak lomatium
- Sanicle cymopterus
- Spanish needle onion
- Wildlife
  - Burrowing owl
  - Golden eagle
  - Le Conte's thrasher
  - Least Bell's vireo
  - Mohave ground squirrel
  - Northern sagebrush lizard
  - Swainson's hawk

Approximately 63,934 acres of the Coso Range-Olancha Mohave ground squirrel core area is located within the northern portion of the subregion.

Primary recreation activities and resource uses occurring in the area are: domestic sheep and cattle grazing, mineral exploration, utility and aqueduct corridor maintenance, communication site maintenance, recreational vehicle touring/sightseeing, dispersed hiking and camping, rock climbing, upland gamebird and deer hunting, bird watching, wildflower viewing, rock hounding, mountain biking and equestrian use. Much of this sub-region is designated as wilderness.

The proposed route designations provide for vehicle access to the following features: Owens Peak Wilderness, Sacatar Trail Wilderness, Short Canyon, Sand Canyon, Ninemile Canyon, the LADWP Aqueduct, No Name Canyon, and Indian Wells Canyon. They also provide for vehicle access to dispersed camping throughout the Eastern Sierra. The designations provide access to hiking trailhead opportunities along the boundary of the Owens Peak and Sacatar Trail Wildernesses, Short Canyon, Sand Canyon and No Name Canyon. The designations provide access to staging areas for mountain bike and equestrian recreation throughout the subregion.

The proposed designations provide for vehicle access to and through the subregion's prime chukar, Gambel's quail, and deer hunting areas. Vehicle access to popular rock hounding sites and historic Depression-Era mining sites in Indian Wells Canyon are provided. Also, vehicle access for livestock operations is provided.

The proposed designations provide for vehicle access to every known active mineral exploration area, and provide access along each authorized utility and aqueduct corridor within the area. Vehicle access to all authorized communication sites are also provided for.

### **B.3 Travel Management Area 3**

#### ***Juniper Flats Subregion***

The Juniper Flats Subregion is located east of the City of Hesperia, south of the Town of Apple Valley, and south of State Route 18 up to the southern boundary of the WEMO Planning Area in the foothills of the San Bernardino Mountains. The San Bernardino National Forest comprises the southern boundary of the subregion. The Mojave River runs adjacent to the western

boundary, and California State Highway 18 forms the northern and eastern boundaries. The entire subregion is located in San Bernardino County, California.

The Juniper Flats Subregion is defined by a large block of BLM-managed public lands that abut the San Bernardino National Forest and nearby Deep Creek on the south, and private lands on the east, west, and the north. Juniper Flats is a diverse landscape of mountains, canyons, impressive boulder fields, and washes. Elevations range from 3,000 feet to 6,000 feet. The northern boundary at the highway bisects Fifteen Mile Valley and Rabbit Dry Lake.

In the subregion is located the Juniper Flats ACEC, on a large plateau overlooking Victor Valley that has been a Native American habitation and special use site due to its ample resources and its strategic view of the valley. The ACEC includes one of several watercourses that seasonally flow into the dry lakebeds in the valley floor, with springs and an extensive stretch of riparian habitat in a dense stand of junipers.

Other watercourses running from the mountains to the valley fairly regularly are located in a series of canyons east of the ACEC, including Grapevine Canyon and Arrastre Canyon. A small waterfall is located at the northern end of Arrastre Canyon before it leaves public lands.

The Juniper Flats Cultural ACEC is on the west side of the subregion, and includes a significant Native American habitation and special use site, on a large plateau strategically overlooking Victor Valley. Middens and sub-surface deposits characterize much of the ACEC. These deposits indicate that that Native Americans used large riparian areas as sites for tool manufacture, cooking, food processing, shelter, and hunting. Archaeologists believe that the diversity of multiple abundant game species, such as black-tailed jackrabbits and rabbits, game birds, and mule deer, and plant foods from Yucca fruits, pinyon seeds, Eriogonum seeds, and native grass seeds, in combination with available fresh water made Juniper Flat an important pre-historic site. The ACEC includes one of several main watercourses that seasonally flow into the dry lakebeds in the valley floor below, with multiple springs and an extensive stretch of riparian habitat in a dense stand of junipers.

A BLM bird survey was conducted in 2001 in the central portion of the subregion and detected 61 avian species in Grapevine Canyon and 73 species in Arrastre Canyon. In addition to the California quail and other breeding gamebirds, the canyons are used extensively by neotropical migrants. Federally listed, Southwestern Willow Flycatcher's were found on these surveys of Arrastre Canyon. The flycatchers were seen during the breeding season and were exhibiting territorial behavior, but breeding was not confirmed.

The subregion is a productive ecosystem that provides ample riparian and upland habitat for large and small mammals and predators, and many other species, including habitat for the San Diego horned lizard and the gray vireo, two unlisted species proposed for protection in the West Mojave Plan. Soils are extremely erosive in most areas due to the topography in the area. Major historic fires in the area in the 1990's which scoured the landscape of its vegetation, including much of its remaining Juniper Woodlands, has increased the erosive potential of much of the eastern half of the subregion.

The CNDDDB documents the occurrence and/or suitable habitat of four special status plants (cushenbury buckwheat, cushenbury milk-vetch, Mojave tarplant, and Parish's daisy) within the subregion. Additionally, critical habitat is found for three of the four species (cushenbury buckwheat, cushenbury milk-vetch, and Parish's daisy).

The subregion is dissected by a major power line which runs from Hesperia to points east of Juniper Flats. Four large patented or unpatented limestone operation pits are located where BLM-managed public lands and forest service lands meet at the Juniper Flats Subregion's south central and southwestern boundaries. Road access to these large active mining pits from nearby processing facilities and the transportation network in the valley beyond occurs on improved roads with a heavy volume of large truck traffic. Small exploratory mining activities occur in the central and eastern portions of the subregion, and a large disturbed, abandoned mine is located on the west end of the subregion that is occasionally used for camping. Seasonal cattle grazing also on the Round Mountain Allotment in the area, and occasional land use permits are approved for transient, seasonal apiary farms. Small to moderately-sized communication sites in the subregion serve the communities in the valleys below.

Recreation activities include hiking, dispersed camping, bird watching and hunting, horseback riding, four-wheel drive vehicle touring, motorcycle touring, mountain biking, and wildlife and wildflower viewing. An equestrian campground is located on nearby forest service land and a network of equestrian trails runs up a ridge above Arrastre Canyon in the Juniper Flats Subregion and around Grapevine Canyon and Round Mountain. The area lacks a staging/parking area for horse trailers which limits use to local equestrians. Visitors can camp at Bowen Ranch, a private facility, and also at developed facilities on Forest Service lands. A small, undeveloped camping area is located above Cottonwood Springs in this subregion.

The riparian areas and numerous springs in Juniper Flats, and the hot springs located along Deep Creek on adjacent forest service lands are popular hiking destinations. A parking area is located above the Deep Creek trail, and continuing on the other side of Deep Creek is hiking access to the Pacific Crest Trail.

The 1995 and 1999 fires burned over the entire northeastern third of the subregion, leading to a temporary closure of the area in and around the Juniper Flats ACEC until vegetative recovery had begun. Long-term changes in vegetative cover were triggered or accelerated by these fires, resulting in increased erosion potential and spread of invasive species. These issues can be exacerbated by OHV use, particularly use off of routes. Some routes may need additional flood control devices to control erosion that may occur during heavy rains.

Safety issues can occur where OHV's and mountain bikes use or cross limited-access trucking routes on the east side of the subregion. Topography is such that visibility of the road ahead is impaired in locations, and trucks traveling downhill have a limited ability to stop quickly in response to unforeseen traffic. Authorized traffic is controlled on these roads, but OHV's and mountain bikes may still occur on undesignated route crossings. Juniper flats is an area of significant unauthorized route use, and is currently a management "hot spot" subject to intensive management focus.

In addition, motorcycles and equestrians or hikers use the same trails in many places, resulting in startling of horses or motorcyclists, and aesthetic conflicts. Some anecdotal evidence exists that either supports or does not support startling of animals by motorcyclists and vice versa. Some horses have become accustomed to approaching motorcycles while others may not be. Hikers have complained that the aesthetic experiences in this subregion do not approach a backcountry experience due to the noise and visual effects of OHV vehicles. Another OHV conflict occurs where motorcycle routes have received 4x4 vehicle use, making them difficult to maintain as motorcycle-only motorized routes.

Trespass issues occur in this subregion because of the relative popularity of the area both as a destination and as an access point to reach forest service lands. These occur near the boundary of public lands and private lands, and near the boundary between forest service and public lands, where multiple access points occur. Most of the trespass issues occur as the result of local users. The east-west powerline road, which crosses non-public lands for most of its length through the area, has been a primary access point for local users.

### ***Rattlesnake Canyon Subregion***

The Rattlesnake Canyon Subregion is located east of the Juniper Flats Subregion, southeast of Lucerne Valley. The Bighorn subregion consists of public and private lands found to the south of State Highway 247 from Lucerne Valley eastward, and State Route 18 roughly between its intersection with Camp Rock Road and the community of Yucca Valley, California. The San Bernardino National Forest comprises the southern and western boundary of both the subregion and the WEMO Planning Area in this location. Rattlesnake Canyon Road, a wilderness corridor, provides the major access to the San Bernardino Mountains from the north and Pioneertown Road provides the major access from the east.

The Bighorn Mountains Wilderness is located in the center of the subregion, and extends west into the San Bernardino National Forest. The wilderness consists of the steep canyons and sharp peaks of the rugged Bighorn Mountains, which form the eastern foothills of the San Bernardino Mountains. These features limit motorized access to the subregion from the north and northwest, and the adjacent wilderness in the San Bernardino National forest limit access to the subregion from the northeast.

The Carbonate Endemic Plants Research Natural Area ACEC was designated in the WEMO Plan on approximately 4,400 acres of public lands in the Rattlesnake Canyon Subregion that abut the San Bernardino National Forest. Four listed and one unlisted sensitive plant species occur in this area that are associated with the remaining high-grade carbonate (limestone) soils that have not been disturbed by mining in this region.

The Rattlesnake Canyon Subregion is a productive ecosystem that provides ample riparian and upland habitat for many species, including habitat for special status species including the San Diego horned lizard, gray vireo, Bendire's thrasher, golden eagle, Le Conte's thrasher, and species that are found in the Carbonate Endemics Plants ACEC. The transition area from the mountains down to the valleys includes a narrow band of very high grade limestone that is used in pharmaceuticals and special clays, and provides habitat for rare plant species. The CNDDDB documents the occurrence and/or suitable habitat of seven special status plants (cushenbury buckwheat, cushenbury milk-vetch, cushenbury oxytheca, Little San Bernardino Mountains Linanathus, Mojave monkeyflower, Parish's daisy, and Robison's monardella) within the subregion. Additionally, critical habitat is found for four of the seven species (cushenbury buckwheat, cushenbury milk-vetch, cushenbury oxytheca and Parish's daisy).

The area is an ecological transition zone between desert and mountain vegetation that in many places is relatively undisturbed because of the steep topography, its limited development and access potential, and few nearby population centers. Numerous ephemeral creeks flow through the wilderness and adjacent canyons down to the valley floors into Johnson Valley. Elevations within the Bighorn subregion range from 3,100 to 6,600 feet. The Bighorn Mountains and

surrounding area is known for a wide variety of wildlife species, including large mammals, raptors, and game and non-game birds.

Primary resource uses are large-scale mining and associated rights-of-ways along the southern side of the subregion, powerline and pipeline rights-of-way along the northern edge of the subregion parallel with the highway and on the east side to scattered residences, and cattle grazing in the Rattlesnake allotment that partially overlaps the wilderness.

Recreational activities include OHV touring, technical touring up the Rattlesnake Canyon corridor, hunting, wildlife viewing, hiking, camping, and mountain biking. The area is a popular destination for San Bernardino National Forest-related recreation coming from State Route 18 east of the subregion via the one major east-west access point south of the wilderness.

Trespass issues are a problem in the isolated communities on the east side of the subregion as new roads and development has occurred and the forest service access route has become more popular. Topography and landownership limit the ability of a complete touring loop on public lands, which has also increased trespass problems.

### ***Morongo Valley Subregion***

The Morongo Valley Subregion is located at the southernmost tip of the WEMO Planning Area on either side of State Route 62 just north of the town of Morongo Valley at the southeastern base of San Bernardino Mountains. The subregion is bounded on the west and north by the San Gorgonio Wilderness Area, on the east by the Big Morongo Canyon ACEC and Joshua Tree National Park, and on the south at the San Bernardino County line at the planning area boundary. Elevations on public lands in the area range from 1700 feet on the canyon floor to 3800 feet on the ridges heading up towards the peaks of the San Gorgonio Wilderness. These lands overlap the South Coast Resource Management Planning Area, and public lands within the subregion are primarily managed out of the Palm Springs South Coast Field Office.

Public lands in the area are primarily located within wilderness and the wilderness corridors to inholdings. Three public land focal areas are located outside of wilderness, two on the west side and one on the east side of State Route 62. This area includes the transitional zone between the eastern base of the San Bernardino Mountains and dry upland desert ranges of the City of Twentynine Palms and Joshua Tree National Park, and contains a series of parallel canyons, rocky ridges and boulder outcrops. The subregion is also transitional between the high and low deserts of Southern California. The ephemeral drainages flow down from ridge tops on either side of the highway steeply down into Morongo Valley.

The Morongo Valley Subregion provides an important wildlife corridor used by deer, bighorn sheep, and mountain lions between the San Bernardino National Forest, the San Gorgonio Wilderness Area and Joshua Tree National Park. The springs in this area and in the nearby Big Morongo Canyon Preserve serve as essential sources of water during drought periods.

Big Morongo Canyon Preserve ACEC, located within the subregion, is a 28,274 acre wildlife refuge and National Watchable Wildlife Site. Preserve programs and displays seek to provide educational opportunities for children, youth, and adults to further their understanding of desert and marsh ecosystems, and the function and importance of a preserve on local, regional, and global levels. Numerous non-motorized trails, including boardwalk trails through the marsh and

stream habitats, meander through the Preserve, which is managed by the BLM. Access to the Preserve is via State Route 62.

This area is transected by numerous roads, rights of way, utility corridors, ranches, farms, cabins, and tract homes in the valley below. The public lands further away from the valley floor receive relatively light recreational use due to the many private inholdings and commercial activities. Some OHV activity, hunting, hiking, wildlife viewing, photography, and nature appreciation occurs in this area.

There are few access conflicts in this area due to the relative light use it receives.

### ***Joshua Tree Subregion***

The Joshua Tree Subregion includes the southeastern portion of the Planning Area adjacent to Joshua Tree National Park and south of State Highway 62. The cities of Twentynine Palms and Joshua Tree are at its northern edge along the highway, and provide the primary access points into the area. The subregion forms a narrow band of public land between the park and the towns below.

Most of the subregion is dominated by steep but generally rounded hills, vegetated with the creosote bush scrub community, dry desert lands rise to the south from Highway 62 towards Joshua Tree National Park. The smaller, north-south-trending Twentynine Palms Mountains are located in the western portion of the region and the larger, east-west-trending Pinto Mountains cover its southern half. Elevations range from 1,300 to 4,500 feet.

The central portion of the subregion includes many scenic rock outcroppings that are not far off of the highway. Many washes are located in this area that contains sensitive riparian vegetation communities, including smoke tree, catclaw and desert willow. Stands of Mojave yucca exist within many of the interior valleys. The Old Dale Mining District covers most of the eastern half of the subregion and is well known for its many historic mining features.

The Pinto Mountains Wilderness was established in 2009 and is located at the southern end of the subregion adjacent to the Joshua Tree National Park. Approximately 102,680 acres of desert tortoise Critical Habitat is located within the subregion, as well as approximately 1,418 acres of a designated Mojave fringe-toed lizard ACEC.

Primary resource uses occurring in the subregion are mining and mining exploration, and powerline and pipeline rights-of-way. Recreation activities in the area include rockclimbing and rock crawling, rockhounding, recreational mining, hunting, shooting and off-highway touring. Most of the area south of the town of Twentynine Palms is managed as backcountry with a few main improved routes that run through it and provide access to roadside attractions. The Old Dale Mining District is a popular destination for historic mine buffs. Features include extensive historic mines and related roads, ruins and camps.

Two specific locations have been identified with boundary issues, where OHVs continue into Joshua Tree National Park on routes that dead-end at the park boundary. Two areas have evidence of substantial route proliferation, the result of historic mining exploration, which may impose safety risks from old mining workings and shafts.



### ***Needles Subregion***

The Needles Subregion consists of a narrow swath of land about 12 miles long and 2-3 miles wide running in a NW-SE arc from Interstate 40 just east of Bagdad on the north, around the northeastern and east side of the 29 Palms MCACC, terminating south of Interstate 62 adjacent to Joshua Tree National Park. The eastern boundary of the subregion is Amboy Road in the north, and the Sheephole Valley Wilderness Area and Joshua Tree National Park in the south. It includes the northwest and southwest corners of public lands managed by the Needles Field Office in San Bernardino County, California.

This area comprises a relatively lower and drier desert basin area, and a portion of the historic Route 66 transportation corridor (National Trail Highway) providing access from Barstow to Needles and points east. The most prominent feature is Amboy Crater National Landmark. The Sheephole Valley Wilderness Area substantially limits access options in the southern half of the subregion.

The drive down Amboy Road is one of the most scenic in the Mojave Desert during spring due to the spectacular displays of wildflowers along Amboy Road. Amboy Crater National Natural Landmark marks a majestic black lava crater rim that towers over the adjacent bajada landscape, surrounded by a field of black rock. A few locations of the BLM-sensitive White-margined beardtongue are found north of 29 Palms MCACC in this subregion. This subregion also includes approximately 1,197 acres of Critical Habitat for the desert tortoise.

The area includes pipelines, powerlines, a railroad and its boundaries are marked by major transportation corridors. One active mine, Amboy Mine, and scattered ruins of large mining operations can be found off of Amboy Road and Route 66. There is little opportunity for OHV Touring in this subregion. Most recreationists are in the Needles Subregion either to visit the Amboy Crater National Natural Area, to view wildflowers, or to park at a trailhead of one of the wilderness areas.

There are few access conflicts in this area due to its relatively small size, and the relative light use it receives.

### ***Wonder Valley Subregion***

The Wonder Valley Subregion comprises the area north of State Highway 62 and south of 29 Palms MCACC, between Amboy Road on the east and State Route 247 just north of Bodick Road on the west. The western and southern expansions of the 29 Palms MCACC are adjacent to this subregion on the north and northwest. Most of the area is generally referred to as Wonder Valley.

This subregion is an extension of the east-west Desert Valley basin, with lands gradually rising to a ridgeline on the 29 Palms MCACC to the north. The northeastern corner of the subregion is comprised of the designated Cleghorn Lakes Wilderness Area, and therefore is closed to vehicles except for trailheads immediately off of Amboy Road or from public lands south of the wilderness area. The foothills of the Bullion Mountains rise as you travel north towards the ridgetops in the Cleghorn Lakes Wilderness, and continue into the 29 Palms MCACC. Sand dunes are located in the north-central portion of the subregion adjacent to springs and nearby Mesquite Dry Lake bed, which continues onto the marine base. The Joshua Tree National Park gateway community of 29 Palms is located on the southern boundary of the subregion, and the

City of Joshua Tree is located on its southeastern boundary at the intersection of State Routes 62 and 247. A half-dozen rock outcroppings are located at the northwestern edge of the otherwise flat portion of the subregion, including Giant Rock, a large outcropping adjacent to a dry lake bed.

Some historic dwellings exist in the subregion but this area contains extensive dispersed urban interface from small tract homes, and few undisturbed areas. The sand dunes and springs adjacent to Mesquite Lake bed include sensitive vegetation, most of which is located on private lands. Sensitive plant species occurrence on BLM lands includes the Little San Bernardino Mountains Linanthus and Robinson's monardella. The Wonder Valley subregion includes approximately 6,592 acres of designated desert linkage networks, crucial to the conservation of special status wildlife species. The CNDDB and BLM field offices document the occurrence of the following special status wildlife species and/or suitable habitat: Bendire's thrasher, Le Conte's thrasher, Mojave fringe-toed lizard, and Nelson's bighorn sheep. Approximately 1,220 acres within this subregion has been designated as an ACEC to protect the Mojave fringe-toed lizard.

An active salt mine is located on Dale Lake Bed in the southeastern corner of the Wonder Valley Subregion. Historic and active mining claims are prevalent in the Copper Mountain and other highlands public land areas, interspersed with broad valleys that are primarily private rural residential lands. The area includes features typical of the southeastern Mojave Desert, with some rock outcroppings that offer opportunities for exploration. Just off the northwestern edge of this subregion is a well know destination known as Giant Rock, and south of that is the Integratron "rejuvenation" machine", built in 1959, which has become an international tourist attraction. In the north-central portion of the subregion is Copper Mountain Community College, a small community college that primarily serves residents of the surrounding small towns and rural areas. The college students use the area surrounding the college for recreational pursuits outside of the classroom, and the area immediately north of the college shows significant signs of on- and off-route use of OHVs.

Some of the major issues in this area are trespass, air quality and noise due to the many residences along unmaintained roads that are interspersed with empty lots and public lands. Route designation is more constrained in this area because many private lands were obtained through the Small Tracts Act of 1938, a desert settlement act originally for World War I servicemen that targeted specific areas, including the Wonder Valley area. In many cases no access was set aside in classification orders for individual tracts, and in such cases reserves were made around the entire perimeter of the tracts. These reserves resulted in unnecessary access routes adjacent to many tracts, and restricted the use of the entire tracts by the purchasers. As a result there is a system of routes in this rural area that is more akin to a square road system within an urban suburb containing small tract homes.

### ***Pisgah Crater Subregion***

The Pisgah Crater Subregion is bounded on the north by Interstate 40, on the south by the 29 Palms MCACC, on the west by Powerline Road, which serves as access for the adjacent Rheox Mine just to the west of this subregion, and on the east terminates just beyond (east) of Bagdad and 2.5 miles west of Ludlow.

This area is a small narrow swathe of land 2-3 miles wide, about 12 miles long between Interstate 40 and 29 Palms MCACC. The major geographic feature in this area is the Pisgah cinder cone and the associated black lava flow that covers the eastern third of the subregion. Adjacent to the cinder cone, a large lava field trends toward the east-southeast, eventually ending on 29Palms MCACC. A large portion of this lava field and the land immediately northeast of the lava field was designated as an ACEC to protect the unusual plants including white-margined beardtongue habitat in the lava fields and adjacent to the north. The ACEC also includes the sandy habitat on either side of Interstate 40 which is potentially suitable for Mojave fringe-toed lizard habitat.

The Pisgah cinder cone and lava field provides a unique mars-like, scenic black landscape over Lava tubes adjacent to the Pisgah crater cone provide habitat for sensitive bat species. Sensitive species that occur in population nodes in the sandy, lavic soils include white-margined beardtongue and crucifixion thorn; which also provides suitable habitat for the Mojave fringe-toed lizard. Occurrence of this species has been documented within the subregion. The lava fields also have extensive networks of “lava tubes” which may support sensitive endemic cave invertebrates.

The prominent cinder cone feature that dominates the landscape makes the area popular for scenic touring and photography. Casual use spelunkers as well as biologists and other scientists explore the lava tubes surrounding the cinder cone. The cinder cone itself is the location of an active mining operation for its unusual decorative rock. Away from the cinder cone and adjacent lava field, it is a relatively remote area with few visitors, yet human sounds are near constant because of intensive ambient sounds associated with transportation activities and low flying aircraft.

Access conflicts can occur between the mining operation and casual users which occasionally trespass onto private lands. Because of the intermittent nature of the mining operation, this issue is not as problematic here as at some other active mines. Casual spelunkers can also cause damage to the fragile biological resources in the lava tubes.

#### **B.4 Travel Management Area 4**

##### ***Jawbone Subregion***

The Jawbone Canyon subregion includes the Jawbone Canyon and Dove Spring Open Areas, and Bright Star and Kiavah Wilderness Areas.

The Jawbone subregion includes approximately 84,226 acres (approximately 32% of the subregion) of designated desert linkage networks, crucial to the conservation of special status wildlife species. The CNDDDB and BLM field offices document the occurrence of the following special status species and/or suitable habitat:

- Plants
  - Charlotte’s phacelia
  - Kelso Creek monkeyflower
  - Mojave tarplant
  - Spanish needle onion

- Wildlife
  - Bendire's thrasher
  - Burrowing owl
  - Golden eagle
  - Le Conte's thrasher
  - Mohave ground squirrel
  - Pallid bat

Approximately 54,448 acres of the Little Dixie Wash Mohave ground squirrel core area is located within the eastern portion of the subregion. In addition, the Jawbone Subregion contains numerous ACECs including, those set-up for the conservation of the Bendire's Thrasher and Kelso Creek monkeyflower. Over half of the northern portion of the subregion includes the Jawbone-Butterbrecht ACEC and a small portion of the Middle Knob ACEC overlaps with the southern boundary of the subregion.

The extensive amount of private property checker boarded with public lands in the southern and western portions of this subregion result in access conflicts. The Pacific Crest National Scenic Trail also traverses through the management area. This trail sometimes sees user conflicts between non-mechanized and motorized user when some vehicles trespass onto this trail.

### ***Middle Knob Subregion***

The Middle Knob Subregion, located approximately 40 miles southwest of Ridgecrest, is defined by Highway 14 on the east; Highway 58 on the south; the CDCA boundary on the west; and the Jawbone Butterbrecht ACEC on the north. Numerous landowners own the private lands.

Primary recreation activities and resource uses occurring in the subregion are recreational vehicle touring/sightseeing (such as in the proposed Middle Knob ACEC), camping and hiking (such as within the proposed Middle Knob ACEC and the Pacific Crest National Scenic Trail), hunting, domestic sheep and cattle grazing, utility corridor maintenance, communication site maintenance, wind energy, and mineral exploration.

This subregion has a variety of special habitats (pavement plains, vernal pool, springs and grey pine woodland) and artificial waters (small game guzzlers). Biological values of special concern include habitat for desert tortoises, Mohave ground squirrels, raptors (nesting and foraging areas), and special status plants. The CNDDDB and BLM field offices document the occurrence of the following special status species and/or suitable habitat:

- Plants
  - Charlotte's phacelia
  - Kern buckwheat
  - Bakersfield cactus
- Wildlife
  - Burrowing owl

- Golden eagle
- Le Conte's thrasher

Further, cultural resources are significant in the subregion.

### ***Lancaster Subregion***

The subregion consists of an assortment of scattered tracts of public land; predominantly within Los Angeles county. Open routes primarily connect private roads and provide casual OHV recreation. Extensive private land developments w/roads, power and water systems. Other developments include commercial power plant, military bases, airports, hotels, restaurants and gas stations.

The Fremont-Kramer DWMA overlaps with the northeastern corner of the subregion, as well as 1,369 acres of designated desert tortoise Critical Habitat. In addition to desert tortoise populations, approximately 126 acres of the Edwards Air Force Base ground squirrel core area is located within the northeast corner of the subregion.

Due to the scattered nature and small amount of public lands within this area the largest access concern in this area is ensuring that our network connects with those already in place being managed by the local municipalities and other government agencies.

## **B.5 Travel Management Area 5**

### ***Fremont Peak Subregion***

The Fremont Subregion is located approximately 30 miles northwest of Barstow, California. U.S. Highway 395 provides access to the Fremont subregion from the west, Cuddeback Road from the north, Hoffman (Lockhart) Road and smaller roads that skirt around the east side of Harper Lake from the east, and State Highway 58 from the south. It is bounded by the Harper Lake subregion on the southeast, by the Black Mountain Subregion on the northeast, by Cuddeback subregion on the north, by the Rands Subregion on the west, and by the Kramer Hills subregion on the south.

The northwest portion of the subregion includes primarily flat terrain, undulating slightly with some prominent rocky buttes. Vegetation is creosote bush scrub, typical of that found throughout the Western Mojave, transitioning towards the south to a combination of creosote bush scrub and salt bush scrub. The lands in the subregion slowly rise from the west and south towards Fremont Peak located in the northeastern corner of the subregion. The creosote bush scrub community in this area is limited to the bajadas and foothills, extending only about one-third of the way to the top of Fremont Peak. The higher elevations of Fremont Peak are rocky hillsides with widely scattered plants of the Mojave mixed woody scrub community. Smaller outcrops are found in the center of the subregion and along Hoffman Road, the major north-south access road.

The entire subregion is within the Fremont Kramer Desert Wildlife Management Area (DWMA), an Area of Critical Environmental Concern to conserve desert tortoise and enhance its habitat. The designated DWMA continues north beyond Cuddeback Road into the Red Mountain Subregion in TMA 7, and south to the other side of State Highway 58, into the Kramer Hills

Subregion, within TMA 6. In addition, the Barstow Woolly Sunflower ACEC is located in this subregion, which has the highest concentration of the species in the planning area.

The Barstow Woolly Sunflower is a rare West Mojave endemic plant which is found on shallow soils throughout the subregion. Approximately 19,000 acres has been designated as an ACEC for the protection of the species within the central portion of this subregion. The Fremont subregion also provides suitable habitat for the desert tortoise. Over half of the subregion is designated desert tortoise Critical Habitat by the USFWS. Desert tortoise fencing runs along the north side of State Highway 58 to prevent desert tortoise fatalities from traffic on the highway. In addition to the desert tortoise and the Barstow Woolly Sunflower populations, other sensitive resource values include two of the Mojave Ground Squirrel population areas overlap the western and southeastern portion of the subregion.

A north-south utility corridor parallels US Highway 395 on the west side of the subregion and another utility corridor runs east-west from Kramer Junction at that intersection of US Highway 395 and State Route 58. These utility corridors include high-voltage transmission lines and underground pipelines and the access roads associated with their construction and maintenance. Small mining exploration and activity, both historic and recent, occurs primarily in the vicinity of Fremont Peak. Leasable economic mineral resources (oil and gas) occur in the southern part of the subregion. Low-level military overflights occur regularly in this area, and sonic booms are not uncommon.

Most recreation in the Fremont Subregion is either associated with destination-oriented camping or touring. Cuddeback Lake Bed, located adjacent to and north of this subregion, is the most popular recreational and camping destination for travelers in the area. Cuddeback Lake Bed is accessed from Cuddeback Road which runs east off of US Highway 395. Cuddeback Road also provides access to points further east and south. Recreationists also use Cuddeback Dry Lake and some nearby disturbed areas off Cuddeback Road to stage their secondary vehicles. Motorcycles are particularly popular in this area. Hoffman Road provides access to Cuddeback Lakebed from the south and intersects Cuddeback Road. Hoffman Road runs past two smaller lakebeds known as Twin Lakes on the way to Cuddeback Road. Adjacent to Twin Lakes are two well-used staging and camping areas, one of which is particularly popular owing to the unique acoustics created by its location in a natural recess adjacent to a high vertical rock wall. Occasional dual-sport tours occur in and through this area, including, in some years, the multi-day Thanksgiving touring event.

A substantial amount of the non-public land in this subregion is being managed under conservation easement to private landowners. The primary issue in this area is unauthorized use of closed routes and route proliferation near camping and staging areas in sensitive habitat, both on public lands and private lands. Unauthorized use occurs primarily in the northern and western part of the subregion, off of the major east-west and north-south routes, or near highway access.

### ***Black Mountain Subregion***

The Black Mountain subregion is located approximately 25 miles northwest of Barstow and east of the Fremont Peak Subregion. It is tucked between the Fort Irwin Army NTC and three other Subregions in the TMA. It is bordered on the west by Hoffman (Lockhart) Road, on the east by Hinkley Road and BM6285 which angles northeasterly towards Superior Dry Lakes, the pipeline

road on the south boundary of the Black Mountain Wilderness Area, and Fort Irwin and Grass Valley Wilderness Area on the north.

Black Mountain dominates, located in the south central portion of the subregion, along with Opal Mountain to the north of Black Mountain. A parallel ridge line lies northeast of Black Mountain on the other side of a narrow valley. The foothills surrounding Black Mountain provide varying topography and areas of sharp relief, and taper into several valleys to the north and Black Canyon to the east. The westernmost Superior Dry Lake is located in the northwestern corner of the subregion in Superior Valley, and Gravel Hills is located in the northeastern portion of the subregion adjacent to the southern edge of Grass Valley. The Black Mountain Wilderness Area includes Black Mountain and the area immediately around it, and comprises about 20% of the subregion. The Black Mountain Cultural ACEC, designated for its prehistoric and Native American values, overlays about a third of the subregion and includes all of the wilderness area and lands surrounding the wilderness extending further northward and eastward, extending into the adjacent subregion. The ACEC was modified in the 2006 WEMO Plan to include conservation of desert tortoise and sensitive plant species. The entire subregion is within the Superior-Cronese DWMA ACEC, designated to conserve desert tortoise and enhance its habitat.

The Black Mountain Petroglyph Sites are an extensive assemblage of prehistoric rock carvings in the basalt rock outcroppings through the south-central portion of the subregion. The most well-known site is Inscription Canyon, which is nationally known and receives substantial visitation in this area. A number of sites in this area are listed within a National Register District. The prehistoric resources represent habitation, extractive activities, and lakeside adaptations. Many of the sensitive resources in this area also represent historic activities, mostly mining and travel.

Approximately 70 percent of the subregion is designated desert tortoise Critical Habitat. Additionally, the entire subregion is within the Superior-Cronese Desert Wildlife Management Area, an Area of Critical Environmental Concern to conserve desert tortoise and enhance its habitat. The DWMA continues north into Grass Valley Wilderness Area, south into the Harper Lake Subregion, and east into the Coolgardie Subregion. A population of desert cymopterus is located in the southeastern portion of the subregion within the Black Mountain ACEC and Wilderness Area. In addition to the desert tortoise, other sensitive resource values include a portion of the Coolgardie Mesa-Superior Valley Mojave Ground Squirrel Core Population Areas along the eastern boundary of the subregion. Murphy's Well provides essential water for wildlife and is located immediately adjacent to the eastern boundary road, BM6285.

This area is a popular destination and touring subregion. Black Canyon and Inscription Canyon are particularly popular destinations for touring and petroglyph viewing. Opal and Black Mountains are popular rockhounding destinations in the subregion. Superior Dry Lake and its two sister lakes, now located within the Fort Irwin NTC boundary, used to draw many land-sailing enthusiasts and the remaining western lakebed still receives some visitation. Hunting is also popular in this area. Occasional dual-sport tours occur through this area, including, in some years, the multi-day Thanksgiving touring event. The large basaltic mountains and interspersed canyons are also popular for raptor viewing. Low-level military overflights occur regularly in this area, and sonic booms are not uncommon.

Most of the lands in this subregion are federal or State lands. The primary issue in this subregion is vandalism and theft of the sensitive cultural artifacts, particularly in areas which receive higher visitation or are more widely known. Unauthorized use of closed routes occurs in and around the

Black Mountain Cultural ACEC and in the northeastern corner of the subregion towards Cuddeback Dry Lake.

### ***Coolgardie Subregion***

The Coolgardie Subregion, located north of Barstow, is bounded by Fort Irwin NTC on the north, and Hinkley Road which becomes BM6285 and the Black Mountain Wilderness boundary on the west; Fossil Bed Road and a pipeline road, HL7159 mark the boundary with Harper Lake Subregion to the southwest, Irwin Road on the boundary with Mitchel Mountains Subregion to the south and Calico Mountains Subregion to the southeast. The major private landowner is the Catellus Development Corporation. Much of the private land has been acquired by the Department of Defense as mitigation for the expansion of the Fort Irwin Army NTC. Primary access to this area is off of a paved highway, Fort Irwin Road in the southeastern portion of the planning, which connects to another well maintained road, Copper City Road that runs southeast to northwest. Another well used north-south access road off of Fort Irwin Road is the Randsburg-Barstow Road.

The subregion includes the following major geographic features and designations:

- Unique and colorful exposed geologic features
- Lane Mountain provides the high point of the subregion, tapering towards mesas and valleys surrounding it and back up to the volcanic, rocky slopes of the Paradise Range in the north.
- Rainbow Basin/Owl Canyon ACEC: protects paleo geologic, scenic values, sensitive spp.; provides for recreational enjoyment, accessible off Fossil Bed Road, and includes the Mud Hills, Fossil Canyon, Owl Canyon campground, and the colorful Rainbow Basin.
- Approx. 4,000 acres within the Rainbow Basin/Owl Canyon ACEC is a National Natural Landmark and is withdrawn from the mining laws for protection of natural features and recreational values, and the area in and around the Owl Canyon Campground is closed to shooting
- Coolgardie Mesa ACEC and the Paradise Valley ACEC within the central and north central portions of the subregion are proposed for withdrawal from the mining laws for the protection of two of four remaining known populations of the endangered Lane Mountain Milkvetch plant.
- Superior-Cronese DWMA
- A small portion of the Black Mountain Cultural ACEC, designated for its prehistoric and Native American values, extends into the westernmost portion of this subregion, east of Hinkley Road/BM6285. Most of the Black Mountain Cultural ACEC is within the adjacent Black Mountain subregion to the west.

The Coolgardie subregion includes approximately 54,064 acres (approximately 45% of the subregion) of designated desert linkage networks, crucial to the conservation of special status wildlife species. The CNDDDB and BLM field offices document the occurrence of three special status wildlife species (Le Conte's thrasher, Mohave ground squirrel, and desert tortoise) and/or



suitable habitat. Approximately 31,712 acres of the Coolgardie Mesa-Superior Valley ground squirrel core area is located within the northern portion of the subregion. In addition, the Coolgardie Subregion contains 81,478 acres (approximately 67%) of the designated desert tortoise Superior-Cronese DWMA and designated Critical Habitat. Additionally, the occurrence of four special status plant species (alkali mariposa lily, Barstow woolly sunflower, Clokey's cryptantha, and Lane Mountain milk-vetch) have been documented within this subregion. Approximately 9,888 acres of Critical Habitat has been designated within the Coolgardie subregion for the Lane Mountain mild-vetch.

This area is readily accessible to recreational users, RVers, and groups. The central portion of the subregion is very popular for recreational "dry washing" (gold panning) near Copper City Road, including by drywashing clubs. The subregion includes the following activities:

- Recreational touring throughout the planning area.
- Camping both in the Owl Canyon Campground and dispersed throughout the subregion.
- Other recreational activities include touring the motorized Rainbow Basin loop trail, rockhounding, hunting, and motorcycling, including on technical trails in the Mud Hills
- Utility corridor in the southeastern portion of the subregion, and major transmission lines, and a pipeline within the corridor.
- Major mining activities in the southeastern portion of the subregion, zeolites and decorative rock used in landscaping,
- Major prospecting, primarily in the Mud Hills in the west central portion of the planning area east off of Coolgardie Road to Copper City Road.

The area has high recreational use levels in sensitive areas. Drywashing has disturbed critical habitat. Historic disturbances have exceeded the 50-foot Stopping and Parking limits.

### ***Harper Lake Subregion***

The Harper Subregion, located northwest of Barstow, is bounded on the north by a pipeline road (HL7159) which also marks the boundaries with the Coolgardie subregion on the northeast and the Black Mountain Wilderness and subregion boundary on the northwest. A major divided highway, Irwin Road, forms the eastern boundary with the Mitchel Mountains Subregion, State Highway 58 is the southern boundary of the subregion and TMA 5, and the Fremont Peak subregion forms the western boundary of the subregion. The small semi-rural community of Hinkley is located in the south-central portion of the subregion, with its town center at the junction of Hinkley Road and old State Highway 58. A major east-west railroad also runs just north and parallel to State Highway 58.

Waterman Hills in the eastern portion of the subregion, Harper Lake in Harper Valley in the western portion. The southern portion of the subregion encompasses Mud-Water Valley, Waterman Hills, and outlying areas of Barstow. Access to the subregion from the south is obtained from Interstate 15, State Route 58, and Irwin Road.

The Subregion contains 27,275 acres of designated desert tortoise Critical Habitat. In addition, the Superior-Cronese and Fremont-Kramer DWMAs overlap with the majority of the subregion. This subregion also includes the occurrence of four special status plant species (Barstow woolly

sunflower, desert cymopterus, Mojave monkeyflower, and Parish's phacelia) have been documented within this subregion.

Excellent opportunities for both hiking and backpacking exist in the Black Mountains, Opal Mountains, and Calico Mountains. Major activities include camping, rockhounding, hunting, and motorcycle free play. Routes vary from long, flat graded utility corridor routes or the flats of Superior Valley; technical jeep routes in the Calico Mountains; technical single-track motorcycle routes in the Mud Hills; lengthy remote touring routes around the Black Mountain wilderness or through the Grass Valley wilderness corridor; short quickly accessible routes into the Mitchell Range or Waterman Hills; and those that provide a loop opportunity to those that are "dead-ends".

Several public roads are located within the subregion including Harper Lake Road, Santa Fe Avenue, and Lockhart Road. The Grass Valley Wilderness and the Red Mountain subregion (within BLM's Ridgecrest Resource Area) bound the subregion to the north, State Highway 58 to the south, the Black Mountain Wilderness and Superior subregion to the east, and U.S. Highway 395 to the west. The Fremont subregion encompasses a total of approximately 222,750 acres, which includes 52% (116,274 acres) Federal land managed by the BLM, and 47% (105,494 acres) private and State land.

The southern portion of the Fremont subregion includes Water Valley, a relatively large, open and flat area with scattered low rolling hills. This area also includes about half of Harper Dry Lake, which is the lowest point of the subregion at 2,018 feet. A portion of Harper Lake is within a BLM Area of Critical Environmental Concern (ACEC), in support of the birds and wildlife in that area. Vegetation in the Water Valley consists mainly of creosote bush scrub and saltbush scrub, and some scattered Joshua trees. A large number of unimproved roads cross the valley along with public infrastructure facilities that include high voltage transmission lines, wood pole power lines, and telephone lines. In addition, the valley includes intermixed grazing and ranching lands with associated fences and structures.

### ***Mitchell Mountains Subregion***

This subregion has few roads and trails, scattered historic mines, key communication sites on peaks, no springs; significant vista from top of Mitchel Mountain. Intensive use from urban interface includes recreation shooting, OHVs, 4x4s, mountain biking, running, hiking, dog walking, equestrian use, and geo-caching. People commonly wander and explore into fringes along city edge.

The subregion contains 13,925 acres of designated desert tortoise Critical Habitat and the majority of the subregion is located within the Superior-Cronese DWMA. This subregion also includes the occurrence of two special status plant species (Barstow woolly sunflower and Mojave monkeyflower) have been documented within this subregion.

### ***Calico Mountains Subregion***

The Calico Mountains subregion includes the rocky, rugged, colorful Calico Hills and historic mining town; Coyote dry lake in the north portion (closed). The area is very popular for target shooting, riding OHVs and general exploration. Numerous roads, trails, mines, adits, and diggings are popular for groups, jeep clubs, SRPs, exploration, hiking, equestrian, 4x4 touring

and OHV play. The town includes stores, historic cemetery, restaurants, and campground, and is popular with regional, national and international tourists; there is a KOA campground at the freeway. More activities include climbing, photography, painting and commercial photography.

The subregion contains 29,132 acres of designated desert tortoise Critical Habitat and the majority of the subregion is located within the Superior-Cronese DWMA. This subregion also includes the occurrence of two special status plant species (Mojave monkeyflower and Parish's phacelia) have been documented within this subregion.

### ***Cronese Lake Subregion***

The Cronese Lake subregion, located approximately 20 miles northeast of Barstow, California, is defined by the Fort Irwin Military Reservation (National Training Center) on the north, Interstate-15 on the south, the Calico Mountains on the southwest, and the Soda Mountains Wilderness Study Area (WSA) on the east. The extensions of this subregion consist primarily of public lands on either side of the Soda Mountains WSA. This area is remote and rugged with numerous jagged mountains and ranges, scattered small playas, and dry upland desert lands. There are few roads, vast Soda Wilderness Study Area, occasional communication sites, power, pipe and communication lines; mountaintop communication sites and few other developments. Similar to the Afton subregion, this is an ancient, historic and modern day east-west travel corridor and includes portions of Old Spanish National Historic Trail, Mormon Rd, Route 61 and Hwy15. This is the primary path travel and trade corridor between the west coast and all points east. Cronese Lake was the western border of the Anasazi Empire. The area includes a tank trail.

Coyote Dry Lake, Alvord Mountain, and a portion of the Calico Mountains are found within the subregion. Elevations range from 1,700 to 3,600 feet.

The Calico Early Man Site is found at the south end of the subregion. This National Register Property was designated as an ACEC by the 1980 CDCA Plan. A management plan was prepared in 1984. The plan designated a network of vehicle access routes, a network designed to protect the evidence of ancient human occupation.

This subregion is located within the Superior-Cronese DWMA. Additionally, it contains 81,754 acres of designated desert tortoise Critical Habitat.

Primary recreation activities and resource uses occurring in the area are powerline and pipeline rights-of-way, wildlife habitat, cattle grazing, recreational mining, rockhounding, hiking, upland gamebird hunting, and off-highway vehicle use restricted to open routes of travel. The recommended route network provides vehicle access for all of these, as well as for access to each block of non-federal land within the area.

## **B.6 Travel Management Area 6**

### ***Kramer Hills Subregion***

The Kramer subregion is located south of State Highway 58, between the cities of Hinkley and Kramer Junction. State Highway 58 and Edwards Air Force Base bound the subregion on the north, State Highway 395 on the west, and private lands to the east and south. The Kramer subregion encompasses a total of approximately 133,129 acres, which consists of 84,020 acres

(63 percent) federal land managed by the BLM, and 49,109 acres (37 percent) private and State land.

The Kramer subregion is largely an area of alluvial soils and low rolling hills incised by braided, seasonal washes draining toward the Mojave River. Elevations range from 2,273 feet to 3,021 feet. The Kramer Hills, Iron Mountain, and Buckthorn Wash are found within the subregion. The Kramer Hills provide the most topographically varied portion of the subregion, and consist of low-lying, rolling hills composed of a complex of sedimentary and volcanic rocks. Iron Mountain, located in the northeastern portion of the subregion, also provides prominent areas of topographic relief. Most of the subregion is covered with creosote bush scrub and saltbush scrub plant communities. Joshua trees are scattered throughout the Kramer Hills and upper washes, in association with creosote and cholla.

Approximately 65,662 acres of the subregion is designated desert tortoise Critical Habitat. Additionally, the majority of the subregion is within the Fremont-Kramer DWMA, an Area of Critical Environmental Concern to conserve desert tortoise and enhance its habitat. In addition to the desert tortoise, other sensitive resource values include a portion of the Harper Lake Mojave Ground Squirrel Leitner Population along the northeastern boundary of the subregion.

State Highway 58 on the north and U.S. Highway 395 on the west provide access to the subregion. Several public roads are located within the subregion including Shadow Mountain Road, Harper Lake Road, and Helendale Road.

Current land uses include routes for several power lines and gas pipelines, as well as scattered homesteads. Recreational uses within the subregion include primarily OHV activity, and rockhounding in the Kramer Hills. Primary recreation activities and other resource uses occurring in the subregion are power line and pipeline rights-of-way, wildlife habitat, mining, hunting, and off-highway vehicle use restricted to open routes of travel.

The Kramer subregion includes portions of two grazing allotments. The majority of the subregion falls within the Stoddard Mountain grazing allotment. The southernmost portion of the subregion includes a small portion of the Buckhorn Canyon Allotment.

Mineral resources within the subregion are located primarily within Iron Mountain and the Kramer Hills. Gold has been produced at the Kramer Hills, which also includes occurrences of uranium, magnesite and feldspar. Considerable exploration of uranium occurred in the Kramer Hills during the 1970s. At Iron Mountain, limestone, marl, quartzite, and asbestos have been produced. In addition, there are occurrences of clay, copper, and mica in this area. The U.S. Geological Survey has classified the subregion as prospectively valuable for sodium, potassium, oil, and gas. Mining and homestead sites established in the late 19th and early 20th century exist in the area, some of which may have historical significance.

The suggested route network provides for vehicle access to the Kramer Hills, Iron Mountain, and other areas located throughout the Kramer subregion; provides access to sites appropriate to recreational target shooting; provides opportunities for general dispersed camping and back country touring; provides access through each of the primary upland gamebird hunting areas; provides access to popular rockhounding locations; provides access to known areas important for recreational mining; provides motorized access facilitating mountain bike recreation throughout the subregion; maintains vehicle access for a variety of terrain, a variety of trip lengths and access to remote areas for the equestrian community; provides the recreational OHV enthusiasts

a variety of opportunities from which to choose, and it maintains a substantial portion of the dual-sport network (for on-street/off-street motorcycles) which runs throughout the subregion.

### ***Iron Mountain Subregion***

The major landscape feature in the Iron Mountain subregion is the Mojave River along the TMA southern boundary. Trails and roads in this area are popular for equestrian riding, hiking, scenic touring, 4x4 exploration and OHV play; hunting, photography and bird watching. Features include the Old Spanish National Historic Trail, Mormon Rd., BNSF tracks, historic mines and old stage routes north to Harper and Death Valley.

Approximately 8,500 acres of the subregion is designated desert tortoise Critical Habitat. Additionally, the northwestern portion of the subregion is within the Fremont-Kramer DWMA, an Area of Critical Environmental Concern to conserve desert tortoise and enhance its habitat. In addition to the desert tortoise, other sensitive resource values include a portion of the Harper Lake Mojave Ground Squirrel Leitner Population along the northwestern boundary of the subregion.

### ***El Mirage Subregion***

The El Mirage subregion, located northwest of the community of Adelanto and due north of BLM's El Mirage Off-Highway Vehicle Area is defined by Edwards Air Force Base to the north and west, State Highway 395 to the east, and the El Mirage Off-Highway Vehicle Area immediately to the south. The western boundary is not well defined, consisting of private and Federal lands. The subregion is located in both Los Angeles and San Bernardino Counties.

The Shadow Mountains, in the southwestern corner, trend northwest-to-southeasterly, and have a maximum elevation of 3,996 feet. The greater area is characterized by bajadas, dry lakebeds, washes, rugged hills, and desert mountains. Vegetation consists of three basic types, creosote bush scrub, saltbush scrub and alkali sink scrub, all of which are typical of the western Mojave Desert. Creosote bush scrub is by far the dominant vegetative type.

Approximately 26,934 acres of the subregion is designated desert tortoise Critical Habitat. Additionally, the entire subregion is within the Fremont-Kramer DWMA, an Area of Critical Environmental Concern to conserve desert tortoise and enhance its habitat.

Primary recreation activities and resource uses occurring in the area are powerline and pipeline rights-of-way, rockhounding, cattle grazing, recreational mining, upland gamebird hunting, hiking and camping, wildlife habitat, and off-highway vehicle use restricted to open routes of travel. Particular designated routes provide access to various blocks of non-federal land within the area.

### ***Victorville Subregion***

Approximately 500 acres of the subregion is designated desert tortoise Critical Habitat. Additionally, a small portion of the subregion at the northern border overlaps within the Fremont-Kramer DWMA, an Area of Critical Environmental Concern to conserve desert tortoise and enhance its habitat.

## **B.7 Travel Management Area 7**

### ***El Paso Subregion***

The El Paso subregion, located approximately 10 miles southwest of Ridgecrest, is defined by the El Paso Mountains wilderness area and “old” U. S. 395 to Inyokern on the north, U.S. Highway 395 on the east, the Garlock Road and Red Rock Canyon State Park on the south, and Highway 14 on the west. The subregion is 83,474 acres in size, with 92% federal land (76,998 acres) managed by the BLM and 8% private and state land (6,475 acres). Numerous landowners own the private lands. The El Paso Mountains wilderness is surrounded by this subregion on three sides.

The region consists of prominent volcanic peaks (El Paso Mountains), broad valleys, rolling foothills, badlands, sloping bajadas, braided washes, and narrow canyons. Elevations range from 2,000 feet on the southern boundary to 5,244 feet above sea level on top of Black Mountain. Creosote bush scrub and saltbush scrub are the predominant plant communities in the lowlands, with numerous desert washes, remnant stands of native perennial bunchgrasses on the mountain tops, scattered Joshua tree woodland, and small riparian plant communities at a few of the widely spaced springs.

The El Paso Mountains contain three West Mojave endemic plants: Red Rock poppy, Red Rock tarplant and Charlotte’s phacelia. They are well known as a raptor nesting area and support abundant populations of upland game birds.

Approximately half of the subregion is made up of designated desert linkage networks, crucial to the conservation of special status wildlife species. A small portion of the subregion contains desert tortoise Critical Habitat (approximately 68 acres) at the southern border. The subregion is also located within the boundaries of key Mohave ground squirrel populations described as the Little Dixie Wash, Fremont Valley/Teagle, and Ridgecrest populations.

Primary resource uses occurring in this subregion are: domestic sheep grazing, mineral exploration, utility corridor maintenance, communication site maintenance, and various recreational activities. The BLM’s CDCA Plan identified four sites within the subregion with excellent potential for interpretation and education: Burro Schmidt’s Tunnel; the El Paso Mountains; the Garlock Fault; and the Goler Grabben.

In particular, the El Paso Mountains are heavily used for a variety of recreational activities. The area contains excellent opportunities for upland game bird hunting (chukar and Gambel’s quail) and rock and mineral collecting. Other activities include recreational vehicle touring/sightseeing, dispersed hiking and camping, mountain biking, and equestrian recreation.

The subregion is also used for commercial 4-wheel drive and dual sport motorcycle tours and competitive equestrian endurance rides.

### ***Ridgecrest Subregion***

The Ridgecrest subregion, located south and east of the city of Ridgecrest, is defined by U.S. Highway 395 and the boundary of the Spangler Hills Open Area on the south; the city of Ridgecrest and the China Lake Naval Air Weapons Station on the north and west; and BLM Route RM 138 on the east. 22,465 acres in size, the area is 94% (21,115 acres) Federal land

managed by the BLM and 6% (1,350 acres) private land. Numerous landowners own the private lands.

The general region consists of the rolling Rademacher and Spangler Hills. Sloping bajadas, braided washes, and narrow canyons characterize the general topography. Elevations range from 1,900 feet at the northeastern point of the subregion, to over 3,400 feet above sea level in the hills directly south of the City of Ridgecrest in the western portion of the subregion. Creosote bush scrub is the predominant plant community in the subregion, with cheesebush-dominated plant communities found in the washes, remnant stands of native perennial bunch grasses on the mountain tops and scattered Joshua trees. The subregion also located within the boundaries of key Mohave ground squirrel populations described as the Fremont Valley/Teagle population to the south and Ridgecrest population to the north.

The subregion contains two livestock grazing allotments. The Spangler Hills Allotment is located in the eastern-most portion of the subregion. This allotment is identified by the 1980 Desert Plan as an ephemeral allotment requiring a minimum of 200 pounds of dry vegetation per acre before the livestock are turned out to graze. The Cantil Common Allotment, an ephemeral grazing allotment, covers the remainder of the subregion. Sheep grazing occurs in the area in the spring when the annual vegetation meets the minimum requirements. The northern portion of the subregion contains a portion of the Centennial Wild Horse and Burro Herd Management Area.

The BLM's Mineral Resource Potential Classification identifies most of the subregion as having a moderate potential for the occurrence of placer and lode gold deposits, with a high potential for placer, principally hydrothermal lode gold deposits, identified in the western area of the subregion (Rademacher Mining District). In addition, there is a high potential for construction aggregates (sand and gravel) in the western portion of the subregion, with aggregates mined at the Bowman and Inyokern pits outside the western boundary. There are no active mining operations in the subregion filed under the California Surface Mining and Reclamation Act of 1975 (SMARA), based on reports from the California Division of Mines and Geology. Some interest has been expressed in the far western portion of the subregion as evidenced through mining claim locations. BLM records show, as of March 2001, that there are six lode-mining claims and six placer mining claims in this portion of the subregion in the Rademacher Hills. There is one plan of operation and one pending (April 2001) notice level operation in the Rademacher Hills area of the subregion filed pursuant to the regulations at 43 CFR 3809. There are no aggregate resources being developed within the subregion, and the subregion is not valuable, prospectively or otherwise, for Leasing Act minerals.

A utility corridor crosses the northern portion of the subregion, in an east/west direction. This corridor contains existing facilities.

The Ridgecrest Subregion supports a wide variety of recreation opportunities and experiences including, but not limited to, four wheel drive and motorcycle touring, hunting and target shooting, paintball, stargazing, photography, exploring mining sites, social gatherings, rockhounding, hiking and running, limited dispersed camping, mountain biking and equestrian recreation.

The most prominent recreation feature in the subregion is the Rademacher Hills, located south of the City of Ridgecrest. The Rademacher Hills offer a 12.5-mile network of trails open to hiking, jogging, horseback riding and mountain biking. This area forms the backdrop for the City of Ridgecrest and provides an urban-public land interface that is fast becoming a popular recreation

site for local residents. Motorized trails through the Rademacher Hills provide access from the City of Ridgecrest to the 57,000 acre Spangler Hills OHV Area. A link to the Statewide Motorized Discovery Trail is proposed to connect the trail to the City of Ridgecrest through the Rademacher Hills.

The subregion is also used by a variety of recreation permit holders who use the public lands for mountain bike races, ultra-marathon running events, high school cross country running competitions, equestrian trail rides and endurance events, dual sport motorcycle tours, jeep tours, and other activities.

The area is used for commercial 4-wheel drive and dual sport motorcycle tours and competitive equestrian endurance and mountain bike events.

### ***Red Mountain Subregion***

The Red Mountain subregion, located approximately 20 miles southeast of Ridgecrest, is defined by U.S. Highway 395 and the Kern County line on the west; the Spangler Hills Off-Highway Vehicle Management Area on the north; the China Lake Naval Air Weapons Station B Range on the east; and the Barstow Field Office management boundary on the south. 120,199 acres in size, the area is 82% (98,043 acres) Federal land managed by the BLM and 18% (22,156 acres) private and State land. Numerous landowners own the private lands. The subregion borders the Golden Valley and Grass Valley wilderness areas.

Elevations in the subregion range from 2,568 feet on the Cuddeback Playa to 5,260 feet on Red Mountain. Creosote bush and Mojave saltbush are the predominant plant communities in the lowlands, with cheesebush-dominated plant communities found in the washes, remnant stands of native perennial bunch grasses on the mountaintops and scattered Joshua tree woodland.

Nearly half of the subregion is made up of designated desert linkage networks, crucial to the conservation of special status wildlife species. The subregion contains approximately 111,357 acres of desert tortoise Critical Habitat. In addition to known desert tortoise populations, the subregion is also located within the boundaries of key Mohave ground squirrel population centers described as the Fremont Valley/Teagle and Pilot Knob populations.

The subregion is used for commercial 4-wheel drive and dual sport motorcycle tours and competitive equestrian endurance rides. Further, additional activities in the subregion include commercial filming, mineral exploration, utility corridor maintenance, recreational vehicle touring/sightseeing, dispersed hiking and camping, and upland game bird hunting.

Superior Valley, Monolith Cantil, Lava Mountains, and Pilot Knob are grazing allotments located within the subregion. The first three are ephemeral sheep allotments, and the Pilot Knob Allotment is an ephemeral cattle allotment, which is currently leased to the Desert Tortoise Preserve Committee. Sheep grazing is not currently allowed in the majority of tortoise critical habitat.

The BLM's mineral resource potential classification shows a moderate potential for the occurrence of placer gold deposits in the Randsburg and Atolia mining districts. A high potential for lode and placer gold occurs immediately outside the south boundary of the subregion. There are no active mining operations in the Red Mountain Subregion based on reports from the California Division of Mines and Geology filed under the California Surface Mining and Reclamation Act of 1975 (SMARA). BLM records show, as of March 2001, there are eight lode-



mining claims north and west of Randsburg, and two lode claims located on some older workings on a small hill west of the Black Hills.

There are approximately 246 placer mining claims in the subregion. The placer claims are clustered in the center of the subregion, with dense clusters in the Atolia mining district and at the Summit Diggings area south of the Summit Range. Small clusters of placer claims are also located in the center of the subregion near Blackhawk Well. Most of the placer mining claims are association placers, each aggregating about 160 acres. As of March 2001, there were five plans of operation and eleven notice level operations authorized by BLM in the subregion pursuant to 43 CFR 3809. Most were approved for small placer operations in the Summit diggings area or assessment work in the remaining area of the subregion.

A utility corridor crosses the western portion of the subregion, running parallel to Highway 395. The corridor contains existing facilities.

Various opportunities for outdoor recreation are present in the subregion. Some of the best upland game bird hunting in the eastern Kern and San Bernardino Counties is available in the Lava Mountains, Red Mountain and Blackwater Well areas. During years when winter rainfall is suitable, seasonal wildflower displays are exceptional in the Golden Valley and Grass Valley areas. Red Mountain Spring (formerly called Squaw Spring) and Steam Well are two cultural heritage sites in the subregion. Both of these sites contain rock art. A route proposed for the California Statewide Discovery Trail crosses from south to north.

Other recreational opportunities and experiences available in the Red Mountain subregion include dispersed camping; four wheel drive and motorcycle touring; target shooting; rock hounding; hiking in the Golden Valley wilderness and climbing Red Mountain; mountain biking and equestrian recreation; and land sailing on Cuddeback Dry Lake. Several outfitters also use the area for recreational activities operated under recreation use permits including equestrian endurance rides, dual sport events and jeep tours.

Commercial filming in the subregion occurs primarily on Cuddeback Dry Lake where an average of 15 permits a year is issued for advertising and motion picture projects.

### ***Rands Subregion***

The bajadas, alluvial fans, and undulating hills that lie between the towns of Randsburg and California City along with scattered sections of land south of California City within eastern Kern make up the Rands subregion. Recreational activities within the region include OHV trail riding and touring, upland game bird hunting, rock hounding, gold prospecting, hiking, nature study, and photography. Popular destination locations include the Desert Tortoise Research Natural Area, Government Peak, and the living ghost town of Randsburg.

The subregion contains approximately 52,676 acres of desert tortoise Critical Habitat. In addition to known desert tortoise populations, the subregion is also located within the boundaries of the key Mohave ground squirrel populations centers described by Leitner as the Fremont Valley/Teagle and Boron Extension populations. Other known Mohave ground squirrel populations within the subregion include the Boron/Kramer Junction and Desert Tortoise Natural Area populations.

Occasionally vehicle trespass into the Desert Tortoise Research Natural Area is of concern. This issue has lessened over time with fencing being completed around the area and volunteer and staff patrolling the perimeter to maintain the fence.

Due to the scattered nature and small amount of public lands within the southern portion of this subregion an access concern for this area is ensuring that our network connects with those already in place being managed by the local municipalities and other government agencies.

## **B.8 Travel Management Area 8**

### ***Newberry-Rodman Subregion***

The Newberry/Rodman subregion, located just south of Newberry Springs, California, is defined by Interstate-40 on the north, the Twentynine Palms Marine Corps Base and the Johnson Valley Off-Highway Vehicle Area on the south, and Camp Rock Road on the west. The subregion is 81,585 acres in size, with 73.6% Federal land (60,012 acres) managed by the BLM and 26.3% private and State land (21,481 acres). Catellus Development Corporation is the primary private landowner.

The general region consists of two small rugged mountain ranges and the surrounding foothills, valleys, sloping alluvial fans, washes, lava flows, and canyons. The entire area shows evidence of volcanic geologic activity, which provides for dramatic views. Elevations range from 1,800 feet to 5,100 feet in the Newberry Mountains. Creosote bush scrub is the predominant plant community in the lower elevations, with a desert willow-dominated plant community found in the dry desert washes, and remnant stands of perennial bunchgrasses in the higher elevations. Joshua tree woodland and small, riparian plant communities may also be found here in select locations. Many raptor nesting sites are found in the region. Kane Wash, which runs in a southwesterly to northeasterly direction, bisects the subregion, separating the Newberry Mountains wilderness and the Rodman Mountains wilderness. Access to this subregion is from Interstate-40, a power line road to the southeast, and Camp Rock Road on the west side.

A wide diversity of cultural site types are found here, some of which are associated with a National Register District. The Serrano tribe lived in the region, resulting in rock art and other cultural sites. Parts of the Rodman Mountains are designated as an ACEC to protect cultural resources. Additionally, approximately 2,000 acres within the subregion are designated as an ACEC to protect the Mojave monkeyflower. Most of this area is within the Rodman Mountains Wilderness. The subregion contains approximately 101,326 acres of designated Critical Habitat for the desert tortoise. In addition to the desert tortoise, the prairie falcon and the golden eagle are found in the subregion, and the area is a potential reintroduction area for bighorn sheep. The Ord Mountain grazing allotment is located in the subregion. Much of the area is highly scenic in character, and both hiking/backpacking and upland gamebird hunting opportunities are plentiful.

Primary recreation activities and other resource uses occurring in the subregion are cattle grazing, mineral exploration/production, utility corridor maintenance (2 major utility corridors), communication site maintenance, recreational vehicle touring/sightseeing, dispersed hiking and camping, equestrian recreation, upland gamebird hunting, and rockhounding.

The Ord grazing allotment is located within this subregion. This allotment consists of 154,848 acres, of which 14,820 are private.

In regards to mineral values in the subregion, construction materials (crushed rock, sand and gravel) are being produced from the northwest area of the Newberry Mountains (Cal West Quarry). There has been production of placer gold at the Camp Rock mine. Cinders have and are being produced from Pipkin cinder cone (Malpais Crater) in the south-central part of the subregion. Borates (Fort Cady Minerals) and specialty clays (Rheox) are being produced in the eastern part of the subregion. BLM classified the western portion of the subregion as having a moderate to high potential for the occurrence of copper, silver, lead, tungsten and gold based on past exploration and production. The eastern portion of the subregion has a high potential for borate minerals and clay deposits.

A utility corridor runs along the northern boundary of the subregion, while another utility corridor crosses from north to south.

Excellent hiking/backpacking and upland game hunting opportunities exist in the Newberry and Rodman Mountains. There are three highly rated interpretive sites within the subregion, the Newberry Mountain Caves, Pipkin Cinder Cone, and the Rodman Mountain petroglyphs. Other federal plans relating to this subregion include the Johnson Valley Off-Highway Vehicle Area Management Plan.

The suggested route network provides for vehicle access for these resource uses and recreational activities. Further, they provide access to each block of non-federal land within the subregion.

### ***Ord Mountains Subregion***

The Ord subregion, located southeast of Barstow, California, is defined by State Highway 247 on the west, the U.S. Marine Corps Firing Range on the north, Camp Rock Road on the east, and greater Lucerne Valley on the south. The Newberry Mountains Wilderness lies immediately to the northeast, the Johnson Valley and Stoddard Valley Off-Highway Vehicle Areas to the southeast and northwest respectively, and private land of Lucerne Valley to the south.

Apart from the portion north of Power Line Road and a small portion to the south, the subregion consists of the BLM's Ord Mountain Route Designation Pilot Planning Unit. The Planning Unit consists of approximately 126,000 acres, located between the Stoddard Valley and Johnson Valley Off-Highway Vehicle Areas. As such, it is a popular connector between the two. In early 1995, the Ord Mountain Pilot Project was initiated as an opportunity to conduct OHV route planning and vehicle access planning for the West Mojave Plan.

The subregion includes three important desert peaks in close proximity to one another, Ord Mountain, East Ord Mountain, and West Ord Mountain; as well as Daggett Ridge and portions of East Stoddard Valley and North Lucerne Valley. Elevations in the area range from 2,500 feet to 6,309 feet above sea level.

The Ord Mountain area consists of valleys, rolling and jagged hills, sloping bajadas, braided washes, and barren playas. The creosote brush scrub plant community is the dominant vegetative assemblage found within the subregion. Plant species within this community include creosotebush, burrobush, Mormon tea, allscale saltbush, golden cholla, and beavertail cactus. A BLM sensitive species, the Mojave monkeyflower, is found here and approximately 23,000 acres within the subregion are designated as an ACEC to protect this species.

The subregion contains approximately 106,574 acres of designated Critical Habitat for the desert tortoise. Other reptile fauna found in the area include desert banded gecko, desert horned lizard,

rosy boa, and Mojave rattlesnake. Notable avian species include golden eagle, prairie falcon, roadrunner, burrowing owl, and loggerhead shrike. Mammalian fauna include desert woodrat, antelope ground squirrel, black-tailed jackrabbit, kit fox, and coyote.

Primary recreation activities and resource uses occurring in the area are cattle grazing, powerline and pipeline rights-of-way, rockhounding, rock climbing, communication sites, camping, hiking, wildlife habitat, mining and recreational mining, hunting, and off-highway vehicle use restricted to open routes of travel.

The Ord Planning Unit consists of a precise vehicle network, restricting access to only essential routes of travel; all other historical routes are either closed or are limited to access by certain individuals for specific reasons, such as maintenance crews and ranch operators.

The recommended route network provides for vehicle access to the following features. Stoddard Valley Off-Highway Vehicle Area, to the west, and Johnson Valley Off-Highway Vehicle Area, to the southeast. In addition to these, the historic Ord Mountain Road and the Daggett Wash Road are accessible by four-wheel-drive vehicles and motorcycles. Mining operators used these two historic roads to haul their ore to the railhead in Daggett, California. Hercules Rock, on the south of the subregion, is a popular destination for rock climbers.

In addition, the network provides for access to the boundary of the Newberry Mountains wilderness, to the east; vehicular travel is not permitted within wilderness, but hiking, camping, and horseback riding are encouraged.

Many visitors to this area take advantage of the many hunting opportunities for small game birds found here. Hunting is enhanced in the region by a variety of water sources to be found here, including springs and guzzlers.

The recommended route network also provides access to various blocks of non-federal land within the area.

### ***Johnson Valley Subregion***

The major feature in the Johnson Valley subregion is the Johnson Valley OHV Area designated for 4x4 and OHV use, including exploration, touring, play and competition. The area is popular for large scale OHV events and competitions. It includes the Cougar Buttes area popular with trials bike SRP events and commercial filming. The area includes dry lakebeds, lava flows, rugged mountains, long valleys, springs, Creosote and Yucca Ring plan assemblies, and extensive and large scale mine operations. Sensitive areas are closed and fenced; signs, kiosks and visitor patrols help guide visitors and protect sensitive resources.

The subregion contains approximately 5,000 acres of designated Critical Habitat for the desert tortoise, as well as the occurrence of other sensitive species such as the golden eagle, Le Conte's thrasher, western mastiff bat, and Little San Bernardino Mountains Linanthus.

### ***Stoddard Valley Subregion***

The Granite subregion, is defined by State Highway 247 on the east, the Stoddard Valley Off-Highway Vehicle Area on the north, private lands on the west, and private lands on the south. The Granite Mountains, Sidewinder Mountain, North Lucerne Valley, and Stoddard Ridge are all found within this subregion. Elevations range from 3,000 feet to 4,900 feet.

The subregion contains the occurrences of sensitive wildlife species including the Bendire's thrasher, burrowing owl, golden eagle, Le Conte's thrasher, Mojave fringe-toed lizard, western mastiff bat, Barstow woolly sunflower, Mojave monkeyflower, and Parish's phacelia. ACECs within the subregion have been set-up to protect sensitive species including the Bendire's thrasher, Mojave fishhook cactus, and Mojave monkeyflower.

Primary recreation activities and resource uses occurring in the area are cattle and sheep grazing, powerline and pipeline rights-of way, rockhounding, communication sites, hiking, camping, wildlife habitat, mining and recreational mining, hunting, and off-highway vehicle use restricted to open routes of travel.

Some designated routes provide access to many blocks of non-federal land within the area.